WHAT IS CLAIMED IS:

1. A method for depositing a quantity of fluid on a substrate surface having a binding agent stably associated therewith, said method comprising:

positioning a thermal inkjet head filled with said fluid in opposing relation to said substrate surface; and

actuating said thermal inkjet head in a manner sufficient to expel said quantity of fluid onto said substrate surface;

whereby said quantity of fluid is deposited on said substrate surface.

2. The method according to Claim 1, wherein said fluid is heated prior to said actuation.

3. The method according to Claim 1, wherein said fluid comprises a biomolecule.

4. The method according to Claim 3, wherein said biomolecule is a nucleic acid.

5. The method according to Claim 1, wherein said fluid substrate surface is the surface of an array.

6. A method for depositing a quantity of fluid on an array surface, said method comprising:

loading said fluid into a thermal inkjet head comprising an orifice and a firing chamber by contacting said orifice with said fluid in a manner sufficient for said fluid composition to flow through said orifice into said firing chamber;

positioning said thermal inkjet head filled with said fluid in opposing relation to said array surface; and

actuating said thermal inkjet head in a manner sufficient to expel said quantity of fluid onto said array surface;

whereby said quantity of fluid is deposited on said array surface.

7. The method according to Claim 6, wherein said method further comprises applying back pressure to said head during said contacting step.

8. The method according to Claim 6, wherein said fluid comprises a biomolecule.

9. The method according to Claim 8, wherein said biomolecule is a nucleic acid.

10. A method for introducing a fluid sample to a binding agent, said method comprising:

positioning a thermal inkjet head filled with said fluid sample in opposing relation to a surface of an array, wherein said array comprises a plurality of binding agents stably associated with said surface;

actuating said thermal inkjet head in a manner sufficient to expel a quantity of said fluid sample onto said array surface; and

allowing interaction between said fluid sample and said binding agent.

11. The method according to Claim 10, wherein said fluid comprises a biomolecule.

12. The method according to Claim 11, wherein said biomolecule is a nucleic acid.

13. A method for detecting the presence of an analyte in a fluid sample, said method comprising:

positioning a thermal inkjet head filled with said fluid sample in opposing relation to a surface of an array, wherein said array comprises a plurality of binding agents stably associated with said surface and at least one of said binding agents specifically binds to said analyte;

actuating said thermal inkjet head in a manner sufficient to expel a quantity of said fluid sample onto said array surface; and

detecting the presence of any binding complexes between said at least one binding agent and said analyte on said array surface;

whereby the presence of said analyte in said fluid sample is detected.

14. The method according to Claim 13, wherein said analyte is a biomolecule.

15. The method according to Claim 14, wherein said analyte is a nucleic acid.

16. The method according to Claim 13, wherein said method further comprises heating said fluid sample prior to said actuating.

17. The method according to Claim 13, wherein said method further comprises washing said array prior to said detecting step.

18. A method for performing an array-based hybridization assay, said method comprising:

(a) positioning a thermal inkjet head filled with a fluid nucleic acid sample in opposing relation to a surface of an array, wherein said array comprises a plurality of nucleic acids stably associated with said surface;

(b) actuating said thermal inkjet head in a manner sufficient to expel a quantity of said fluid sample onto said array surface to produce a sample contacted array;

(c) maintaining said sample contacted array under hybridization conditions for a period of time sufficient for any complementary nucleic acids to hybridize to each other;

(d) washing the surface of said array; and

(e) detecting the presence of any double-stranded nucleic acids on said array surface.

19. The method according to Claim 18, wherein said method further comprises heating said fluid sample prior to said actuating.

20. The method according to Claim 18, wherein said quantity does not exceed 200 pico liters.

21. A sample contacted array produced in the assay according to Claim 18.